

1937

Annual Report 1937 of Ninepipe, Pablo
Pishkun, Willow Creek and Benton
Lake Refuges of Montana

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 Ronan, Montana

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Creek and Benton Lake Refuges of Montana

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It is realized that the following tables on the birds of the refuges broken down in spring migrants, summer residents, nesting, fall migrants, winter residents, and visitors, are not complete lists; and where a bird is checked under one or more of the headings, it does not necessarily mean that it shouldn't also be checked under other headings, but does infer, however, the time of year seen on the refuge by the writer.

When a bird was checked nesting, its nest was found, or it was seen with young on the refuge. The word visitor is used for those birds who spend very little time on the refuges, but occasionally visit them. As time goes on complete records for these birds should be obtained and more complete lists formed for each refuge. But under the circumstances, my lists can not be complete, but in any event, I believe these tables impart the information asked for in Part One of Memorandum No. 43, perhaps with the exception of unusual concentrations which are discussed under "Use made of refuges."

Use Made of Refuges. Many desert horned larks and long snurs wintered on Pishkun refuge. I saw as many as 4500 on a small part of the refuge on February 8. Large flocks of snow buntings were found on all five of the refuges; on Jan. 8, on Pablo Refuge I saw 5000. On Jan. 6 on Ninepipe, I saw 200 evening grosbeaks. Sharp-tailed grouse, Hungarian partridges, and Chinese pheasants wintered on Willow Creek; partridges and pheasants wintered on Pablo and Ninepipe. We fed over 1000 Chinese pheasants and 250 Hungarian partridges during January and February.

Pablo was completely frozen over by December 1, while Ninepipe was open until December 14. The main flocks of migratory waterfowl left the refuges on those dates, but throughout the months of December, January, and February, ducks and geese could be seen in scattered bunches feeding on patches of water spike rush and ranunculus where the snow had blown off. Wintering ducks in the near vicinity of Ninepipe and Pablo were estimated at about 25,000 consisting of mainly mallards; however, pintails, green-winged teals, snovelers, as well as some baldpates were included.

The Biological Survey furnished about 11 tons of wheat for feeding ducks. The Bureau supervised the winter feeding of Flathead valley; cooperation was extended by the State Game and Fish Commission Indian Agency, sportsmen and farmers.

Spring migration was at its height in March. I was not in my district during the forepart of March, but thousands of geese and ducks were reported to have used Ninepipe and Pablo. On March 17, I conservatively estimated 7,000 Canada geese, 250 snow geese, and about 11,000 ducks on Pablo. It is interesting to note that on March 21

Birds seen on Benton Lake 10
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Name	Spring Migrant	Nesting	Summer Resident	Fall Migrant	Winter Resident	Visitor
<u>Land</u>						
1. Phoebe	X	X	X	X		
2. Swainson's hawk	X		X	X		
3. Western red-tailed hawk	X		X	X		
4. Meadow lark	X	X	X	X		
5. Long spurs	X	X	X	X		
6. Western robin	X	X				
7. Crows	X		X	X		
8. Magpie	X		X	X		
9. Night hawk	X		X			
10. Mourning dove	X	X	X		X	
11. Desert sparrow hawk	X	X	X	X		
12. English sparrow		X	X			
13. Barn swallow	X	X	X	X	X	
14. Brewer's blackbird	X		X	X		
15. Mountain bluebird	X		X	X		
16. Prairie falcon			X		X	
17. Burrowing owl	X		X			
18. Golden eagle						X
19. Arkansas Kingbird	X		X			
20. Desert horned lark		X	X		X	
21. H. Wren shrike	X			X		
22. Western vesper sparrow	X	X	X	X		
<u>Water</u>						
1. Buddy duck	X		X	X		
2. Pintail	X	X	X	X		
3. Green-winged teal	X	X	X	X		
4. Baldpate	X			X		
5. Mallard	X	X	X	X		
6. Gadwall	X			X		
<u>Shore birds</u>						
1. Common tern	X	X	X			
2. Black tern	X					
3. Killdeer	X	X	X	X		
4. Upland plover	X	X	X			
5. Avocet	X	X		X		

Mammals found on the refuges of western
Montana, 1937

Pattie

1. Skunk
2. Coyote
3. Muskrat
4. Jackrabbit
5. Cotton-tail
6. Pocket gopher
7. Columbia ground squirrel
8. Marmot
9. White tailed deer
10. Badger
11. Weasel

Ninepipe

1. Skunk
2. Coyote
3. Muskrat
4. Jackrabbit
5. Cotton-tail
6. Pocket gopher
7. Columbia ground squirrel
8. Marmot
9. Badger
10. Weasel

Willow Creek

1. Skunk
2. Coyote
3. Muskrat
4. Jackrabbit
5. Cotton-tail
6. Columbia ground squirrel
7. Richardson ground squirrel
8. Badger
9. Weasel
10. White-tailed deer

Pishkan

1. Skunk
2. Coyote
3. Muskrat
4. Jackrabbit
5. Cotton-tail
6. Columbia ground squirrel
7. Richardson ground squirrel
8. Badger
9. Antelope
10. White tailed deer
11. Weasel

Benton Lake

1. Skunk
2. Coyote
3. Jackrabbit
4. Cotton-tail
5. Antelope
6. Weasels
7. Richardson ground squirrel
- 8.

we had quite a heavy snow and the geese left Pablo, but were back in a few days or on March 26, 10,000 strong, or as soon as the patches of water spike rush were uncovered. Although I was not able to be on Pablo all the time, from what information I could gather as well as from my own observations, I would estimate that 125,000 geese, including 1,500 snow geese used Pablo and about 25,000 used Ninepipe including 800 snow geese during spring migration.

I could not check the ducks every day, and my figures are not complete, but I was astounded at the numbers of ducks using Ninepipe; for instance on March 29, I estimated 40,000 ducks consisting of over half pintails with a close second for themallards, and including baldpates, buffle heads, canvas backs, redheads, green-winged teal, blue-winged teal, golden-eyes and one wood duck. I believe one would be quite conservative in stating that about a quarter of a million ducks visited Ninepipe during spring migration.

Two hundred swan were on Ninepipe March 29. There continued to be a fair representative group of swan from 130 on April 2 to 22 on April 21 and 9 remained on Pablo until May 12 and one pair stayed on Ninepipe continuously, but we have not been able to find their nest.

Althought I was not there during the height of migration on Willow Creek and Pishkun, I am sure it was not as great as that on Pablo and Ninepipe; however, they do have, particularly on Willow Creek, a good representation of rare species of ducks. For instance, on April 28, on Pishkun, there were 295 redheads, 12 buffle heads, 12 ruddy ducks, 2 wood ducks, 25 canvas backs, 16 lesser scaup, 155 red-breasted merganzers, 100 American merganzers, 100 coots, 3 pintail, 15 golden-eye, 12 blue-winged teal, 22 curlew, 200 grebes, and 15 gulls. On Willow Creek on the same date (April 28) there were about 450 redheads, 77 canvas backs, about 450 mallards, about 230 baldpates, 95 pintails, 14 loons, about 160 shovelers, 82 lesser scaup, 14 buffle heads, 2 whistling swan, 8 curlews, about 800 coots, about 400 merganzers, 9 green-winged teal, and about 100 herring gulls.

Nesting birds. Time did not permit a thorough study of nests on Willow Creek and Pishkun. On June 28 on Willow Creek 41 hatched gull nests (mostly herring) were found and 7 which were not hatched, 22 common tern nests, 2 black terns, 5 gadwalls ducks nests, which were not hatched, 2 spotted sandpiper nests, 1 northern phalarope, 1 short-eared owl, 1 mallard, and 1 Hungarian partridge nest with 15 eggs which had not hatched were found. Also 2 pin-tailed grouse with 5 and 6 young, and 1 female pheasant with 8 young were seen. About 250 young ducks were seen on this date consisting of maily redheads and canvas backs and ruddy ducks, mallards pintails were included. No pelican nests could be found.

With the expection of the two potholes, Pishkun is not used extensively for nesting. One mallard nest, one killdeer, several desert horned larks, meadow larks, several common tern, and black tern nests were found. About 200 young ducks were seen the latter part of June on the Pishkun reservoir, including mainly redheads, canvas backs, buffle heads and ruddy ducks and pintails.

The natural nesting islands on Ninepipe are used considerable by all species; artificial islands were being constructed during nesting season. About 1500 young ducks could be counted on Ninepipe and about 900 on Pablo. Something in this connection will be discussed under scientific progress.

Use of refuge by man. The following farmers grazed cattle on Benton Lake during the fiscal year of 1937: Charles Hinderager, Howard Mann, Hugh Mann, Lucy Hinderager, Arthur Hazelton, M. C. Hammett, R. R. Swan, Milton Mann, John Hinkle, with revenue of \$165.54.

Fishermen and campers use Pishkun quite extensively and there is some fishing on Willow Creek. On July 1, the opening date for fishing about 100 people in 30 cars visited Pishkun. On May 9, on Ninepipe 200 people came in 47 cars and fished on the area. 750 man-days of fishing on Ninepipe would be a fair estimate during the spring fishing season for this year.

Plantings. 3,700 plants were set out on Pablo including mainly buckbrush and rose bush; however, chokecherry, elderberry and wild plums were included. 2,622 trees and 418 scrubs, wolfberry and rosebush, and a hundred pounds of bullrush were planted on Ninepipe. Approximately 50 acres of millet were drilled on the shore-line of Pablo Refuge, also a hundred pound sack of smart weed, a wheat sack of burred and 400 pounds of bullrush were planted on Pablo. 600 pounds of prairie bullrush, one wheat sack of smart weed, and one wheat sack of burred were planted on Pishkun; 175 pounds bullrush were planted on Willow Creek.

Predatory animal control. On Pablo in the spring up to the first of July, 1 coyote, 39 skunks, were taken by a WPA trapper, because of this there were few depredations from skunks. On Ninepipe refuge, 32 skunks, 6 weasels, and one dog were taken by NYA boys in five weeks' time.

The Division of Game Management controls the coyotes on Pablo and Ninepipe. At the present time there is no trapper working on Pishkun, Willow Creek. Depredations from predators will be discussed in the nesting study report to be submitted later when completed.

Refuge improvement. During the fiscal year of 1937 the fence was repaired on Benton Lake. The Reclamation CCC camp on Pishkun started to get posts out for the construction of 7½ miles of fence on Pishkun and Willow Creek. A new road on the steep hill entering Pishkun refuge on the east side was constructed by the CCC camp. The cattle guard was repaired, and a spring was dug out and improved on the edge of a pothole northwest of the reservoir on Pishkun refuge. Boundaries for fences on Pishkun and Willow Creek were staked off and a parking area for fishermen was surveyed and material to construct it, transported from Flathead Valley to Pishkun Reservoir.

On Pablo, 23 miles of old fence were removed and returned to farmers; new boundaries were surveyed, about 100 acres of valuable additional land added to the refuge; 6 dams were practically con-

structed and the refuge was entirely surrounded by a new fence, including 6 gates, 3 cattle guards, and 3 large canal crossings.

During the fiscal year of 1937, on Ninepipe about 130 acres of valuable nesting land were added to the refuge, 12 $\frac{1}{2}$ miles of old fence were removed and returned to owners. Three nesting islands were completed and a fourth one partially completed. Ninepipe Refuge was surrounded by about 12 miles of new fence, consisting of two cattle guards, 4 canal crossings, and a possible 9 ditch riders gates (These were not completed). The parking area was leveled off and fenced and an area for ditch riders to turn around in was also fenced. Two pheasant shelters were completed.

The physical improvements of Ninepipe and Pablo Refuges were discussed somewhat in detail in a report submitted to the Washington office on June 24; this WPA report should be attached to the annual report.

Scientific progress. NYA boys started a nesting study on Ninepipe and Pablo, principally Ninepipe. A table is given which lists the nests of the more important species, but by no means signifies the total list of the birds and nests on either area. The table includes 399 nests on Ninepipe and 143 on Pablo; 21 nests are still under observation on Ninepipe. It is realized that with the limited number of man-hours designated for this study, all the nests were not found--perhaps not more than 50% of them. However, this study will be very beneficial to the proper administration of the refuges; information has been obtained which can be used as a basis in recommending a fishing season and the parts of the refuge particularly used for nesting were also learned, not to mention the habits of birds concerned. After this study is complete, it warrants a special detailed report, and will be submitted at a later date.

Along with the cooperation of Mr. C. H. Dexter, Supt. Ninepipe Reservoir, Reclamation service, and his ditch riders, I am trying to determine the average size of pheasant broods in this valley. As the study is not complete a report can not be submitted at this time. Some work on the sex ratio of pheasants has also been done; these results will also be submitted with the above information.

I had listed the plants and was ready to prepare a simple type map area of each refuge, when we received instructions at the St. Louis conference to make type maps in accordance with instructions which we would receive. I have these instructions, but time has not permitted me to work on them; I hope to get started on them next month.

Through experimentation in soaking bullrush seed at Fishkum Reservoir, it was found that it was necessary to soak the seeds 38 days before any of them began to sprout, and necessary to soak burreed 12 days before any of it would sink.

A pair of marmots and two pairs of ground squirrels were caged on Ninepipe and Pablo. Two pheasant eggs along with one mallard egg.

were placed in each cage and left for five days. Neither the marmots nor the ground squirrels ate them. Then both the marmots and ground squirrels were allowed to become exceedingly hungry and the experiment was repeated. Again the eggs were not molested. No depredations from these mammals were found on Ninepipe or Pablo; however, three small freshly killed ducks were found on ground squirrel mounds, but the method of attack indicated that weasels were responsible.

Law enforcement. The following cases were submitted to the Regional Office: Gus A. Tschache, Hamilton, Montana; Thomas Johnston, Anaconda, Montana; John Kallas, Anaconda, Mont.; Duncan MacDonald, Anaconda, Mont.; William Tremper, Ronan, Mont.; Mr. Guy Wolfe and Mr. Peter Henry Wolfe of Whitefish, Montana; Up to date I have little information as to their disposition.

Patrol is quite a serious problem particularly on Ninepipe and Pablo during hunting season and requires extra help.

Water conditions. Water was extremely low on Willow Creek Refuge this year. There was practically no run off this spring through the Willow Creek entering the refuge. The condition was not serious as large deep potholes remained in the refuge.

Pishkun Reservoir was completely filled this season.

The small potholes in the northwest corner of Benton Lake dried up late in the spring but heavy rains on June 11 left water standing on Benton Lake in small areas which were still there when the area was visited the latter part of June.

Ninepipe was not completely filled this year and the potholes around the border did not receive a fresh supply of water. However, because the reservoir was not filled, no nests were flooded this season.

The Reclamation Service was unable to fill Pablo Reservoir this season but the potholes east of the dam and west of the inlet canal as well as one recently developed pothole on the south, have a permanent water supply.

Addendum. During the fiscal year reconnaissance reports were made for the proposed refuge sites of Swan Lake Area, Alkaline Lake, Malone or Muddy and Foster Creeks, and the area southeast and southwest of Pishkun Reservoir and were submitted to the Washington office.

Mr. Salyer asked that I check the nesting birds on the Malone area and on the proposed addition to Pishkun Refuge. The nesting birds in the last area consisted of about 1,000 individuals including about 350 lesser scaup, about 220 redheads, about 200 mallards, about 25 canvas backs, about 50 blue-winged teals, about 45 killdeer, about 25 pintails, about 30 gadwals; gulls, buffle heads, ruddy ducks, western, horned, and eared grebes, were also represented. In

addition there were between 300 and 500 terns, mainly common terns and 80 curlews in the area. Natives reported several bands of deer and 3 elk, 2 black bear and 15 head of antelope. It is well to keep in mind that this area is heavily overgrazed at the present time and is lackin an abundance of aquatic foods. Without doubt if it were developed, and grazing not permitted, it would make a wonderful refuge.

In spite of the ranching activities and the fact that time did not permit me to thoroughly cover the Malone area, the following species of birds along with young were observed on June 9: 150 redhead ducks, 16 ruddy ducks, 25 lesser scaup, 10 buffle heads, 200 shovelers, 1,000 mallards, 600 pintails, 100 blue-winged teal, 50 curlews, 4 avocets, 20 cinnamon teal, 25 baldpates, 1 marble godwit, 100 northern phalarope and 6 coots.

I hope to get up to the proposed Swan Lake area before summer is over.

I might mention the easement of 80 acres which has been obtained and added to Winepipe refuge and is now in the process of development.

During the fiscal year of 1937 I went to Washington, D. C. and to St. Louis to the conference of the Division of Migratory Waterfowl. Mr. Salyer, Mr. Laythe, Mr. Steen, and Mr. Rogers have all visited this district.

Administration of area. Two patrolman laborers are sorely needed in the administration of these areas. For instance, if I had someone on Willow Creek and Pishkun to help look after them, I am quite sure I could get some NYA boys to assist with activities there. I would also like to spend more time with the farmers which would be very valuable to my district. Pablo refuge has potential possibilities from the standpoint of raising cereals. I think it would be a good investment for the bureau to take advantage of this excellent dry land on Pablo and provide this district with sufficient machinery and help to operate these refuges properly. I don't doubt but what we could ~~produce~~ ^{produce} wheat for winter feeding for most of the State.

Relationship of pheasants and migratory waterfowl. Under the present density population of upland game birds and migratory waterfowl on the refuges, no mal relationships on either side have been observed; however, one item of interest in this connection has been noticed. The apparent peculiar habit of Chinese pheasants laying eggs in several nests of their own construction at random and then choosing one particular one when ready to set, may satisfy the crow's hunger and discourage his search for migratory waterfowl nests, or the presence of the numerous Chinese pheasants blind alley nests may stimulate the crows' desire and thus intensify their search for additional nests. In either case, this is not a scientific thought, but merely a supposition, but I have found that the crows ~~seem~~ ^{seem} to find these blind alley pheasant nests as they remain open throughout the summer.

Suggestions of Policy

Public relations. I believe that every refuge manager should have a very definite public relation and educational program set up in brief by the Washington and Regional offices. Refuge managers have a splendid opportunity to assist the Bureau with this important function.

Future of Migratory Waterfowl on Farms. Cooperation from farmers and ranchers could be secured if selected qualified men were given their full time to visit farmers and ranchers asking about the nesting birds and obtaining their assistance in finding and counting them, at the same time asking the farmers questions. In any event, make it definitely clear that the farmers' assistance was needed and that he had valuable information which would assist with our work. In the fall these same farmers could be revisited and inquiries made as to how many birds they raised on their farms during the summer.

I find that once a farmer's interest is aroused, he soon exerts a concerted effort to keep from molesting nesting ducks; he begins to believe that the ducks have a place on his farm. The combined efforts of many farmers, no doubt if properly stimulated, would raise a large number of additional migratory waterfowl. Such efforts on the part of the Bureau might greatly supplement the refuge system. Personally I believe the importance of such work can not be over-looked and should be the responsibility of the Bureau rather than the county agents, whose main thoughts and work do not run in that direction and perhaps won't in the future. If a section were established in the division to handle this work, it might become an important part of the restoration program.

Although my time is limited, it is felt that some headway has been made. I believe some of the farmers in this district are beginning to feel more favorable toward the migratory waterfowl. We have good cooperators bordering both Willow Creek and Pishkun.

Items of Interest

Goshawk. On Thursday, Jan. 21, I saw a goshawk take a duck out of mid-air. The hawk was sitting in a tree near by where the ducks were resting in the water. When I flushed the ducks, he apparently made good use of the opportunity provided him.

Prairie falcon. On Jan. 21, a prairie falcon was sitting on a tree near some water where some ducks were resting when an American rough-legged hawk sailed near the tree. The prairie falcon immediately attacked the hawk and continued to torment him for about a mile's distance and then returned to his tree.

Coot. On one instance a coot attached my leg when I attempted to examine her nest and she refused to be budged at any cost.

Ruddy duck. The ruddy duck seems to be master of the water and the males are particularly pugnacious.

Crows. On June 8 Pishkun I saw a Swainson hawk sitting on a rabbit eating it with six crows sitting on the ground surrounding him and trying to chase him off. They reminded me of a bunch of jackals watching a lion feed.

Swainson hawks. On July 6 while on annual leave about one mile east of Dubois, Idaho, I observed at a very conservative estimate about 250 young and old Swainson hawks sitting in the tops of dead cotton wood trees south of the highway. Mormon crickets were in that area in great droves and the hawks were leaving their perches to land on the ground and as observations indicated were devouring the crickets. Five of these beautiful beneficial birds had been killed and their remains exhibited on the fence.

Redhead female ducks. My observations have indicated that the redhead female ducks seem to exhibit more excitement and create a bigger fuss when she is surprised with her young than any other duck nesting on these refuges.

Great blue heron. On June 17 in the outlet of the pothole on the south side of Pishkun Reservoir as observed by William Graves, laborer on that refuge, 14 great blue heron killed 250 fish in addition to those that they ate. The heron left the remains of the 250 fish, mainly suckers, on the banks in the water. As Graves related it, the blue heron found the fish in the shallow water and seemed to take delight in destroying them.